Preconception Care: Planning for the Future

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ABSTRACT

In the United States, rates of maternal mortality, unplanned pregnancies, low birthweight infants, and preterm infants continue to rise, making the need for preconception care a priority in the delivery of care. Traditionally, women have viewed preconception care as a single visit made before attempting pregnancy; however, the maximum benefits are obtained when the woman and her partner receive care throughout the reproductive years, whether pregnancy is immediately planned or not. The primary care nurse practitioner has a pivotal role in the identification of risk factors and encouragement of healthy behaviors that have the potential to improve maternal and perinatal outcomes.

Keywords: contraception, men's health, preconception care, preconception health, pregnancy, prenatal care, reproductive planning

As primary care providers, nurse practitioners (NPs) have an integral role to play in the delivery of preconception care (PCC) to both men and women, with the potential to have a positive impact on health care outcomes. In the past 25 years, the rate of maternal mortality in the United States has doubled; rates of preterm birth and low birthweight infants continue to rise; and, in the majority of states, more than half of all pregnancies are unplanned.[1] These rates have significant societal and economic implications; for example, the number of infants who were born preterm in the US between 2000 and 2010 showed over a 3% increase, and in 2010 the preterm birthrate was 12% of live births, with an estimated economic cost to society of over $26.2 billion.[2] In 2004, the Centers for Disease Control and Prevention (CDC)[3] instituted the PCC work group and panel to examine the state of prenatal care in the US. The committee stated that PCC is ". . . a set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a woman's health or pregnancy outcome through prevention and management" and developed the preconception health and health care recommendations[3] depicted in Table 1. Based on these recommendations, NPs should consider aspects of PCC at every office visit.

BACKGROUND OF PCC

The benefits of prenatal care have long been recognized with advocacy for prenatal care being first introduced to the United states in the early 1900s and it becoming commonplace in the 1980s.[4] In recent years, there have been efforts to emphasize PCC in an attempt to promote healthy lifestyles in both men and women before pregnancy is considered. Additionally, PCC can have positive effects on the rates of preterm birth, low birthweight infants, and unplanned pregnancies. Evidence suggests that interventions provided by PCC have the potential to decrease the chance of adverse maternal, fetal, and neonatal outcomes.[3,5]

Although many women are aware of the benefits of folic acid supplementation before pregnancy and the need to abstain from harmful substances such as tobacco and alcohol after becoming pregnant, many do not consider the effects that health and lifestyle can play on fertility in the period before and between pregnancies. Because many pregnancies are unintended, women may not even begin to consider abstinence from harmful substances until after they discover they are pregnant, which may be beyond the critical period of organogenesis (weeks 3-8 after conception).[6] Likewise, most women and men are not aware of the impact of medical conditions and

Table 1. Preconception Health and Healthcare Recommendations[3]

1. Individual responsibility across the life span
2. Consumer awareness
3. Preventive visits
4. Interventions for identified risks
5. Interconception care
6. Prepregnancy checkups
7. Health coverage for low-income women
8. Public health programs and strategies
9. Research
10. Monitoring improvements

Table 2. Key Preconception Care Points for Women and Men at Each Visit[9]

1. Conception planning—to prevent unwanted/unplanned pregnancy
2. Contraceptive options
3. Preconception education
4. Improve health practices (sexually transmitted infection prevention, management of chronic diseases)
5. Reduction of at-risk behaviors (alcohol, tobacco, medications, drugs)

unhealthy behaviors in the time period when they are not considering a pregnancy.

The Committee on Preventive Services for Women, convened by the Institute of Medicine[7] in 2011, developed comprehensive recommendations for the preventive care of women including broader counseling in contraception to prevent unintended pregnancies, education on pregnancy spacing in order to positively influence birth outcomes, annual screening and counseling for sexually transmitted infections and human immunodeficiency virus, and routine screening for human papilloma virus (HPV). Additionally, the committee recommended that women receive at least 1 well-woman visit each year that must include PCC.[7] Most consumers and many providers are not aware of the recommendations for the provision of PCC, and it may not be reimbursed by all insurance companies.[8]

PCC for Men and Women

Women have traditionally been the focus of PCC, but in recent years there have been increased efforts to include men in PCC. Furthermore, PCC for men has the potential to encourage positive parenting and fatherhood, enhance overall health, encourage positive health and preconception practices of their partners, and result in improved outcomes.[3,9] The key points for PCC for both men and women are summarized in Table 2.

THE NP's ROLE IN PCC

It is imperative that NPs take 3 preconception goals into consideration in the care of both women and men; these goals include the identification of possible risks to the mother and fetus as well as the pregnancy, the education of the future parents or mother regarding their risk factors, and the initiation of interventions.[10] The history and physical examination should be geared toward the patient's chief complaint, and then the provider can incorporate the appropriate aspects of PCC.

Chronic Medical Conditions

The identification and management of chronic medical conditions is of particular importance. Common conditions such as hypertension and diabetes have the potential to have a significant adverse impact on the mother and fetus if not managed before and during pregnancy. For example, uncontrolled hypertension could lead to intrauterine growth restriction and will increase the risk for preeclampsia and eclampsia, and uncontrolled diabetes increases the risk of stillbirth and macrosomia. In the woman who is diabetic and planning to attempt pregnancy, the NP should assess the client's glycemic control and manage appropriately.[11] A woman with a comorbid condition who is considering pregnancy will need detailed assessment and management that may result in changes to any current treatment regimen. For example, the chronic hypertensive patient who is on an angiotensin-converting enzyme inhibitor and becomes pregnant will require a change to a beta-blocker such as labetalol. A complete discussion of these individual conditions and the subsequent management during pregnancy is beyond the scope of this article.

The effects of chronic diseases in men, such as diabetes and hypertension, can affect both the woman's ability to conceive and male sexuality.